

Second enerCEE report:

Wind Energy Uptake in the Baltic Countries

Context

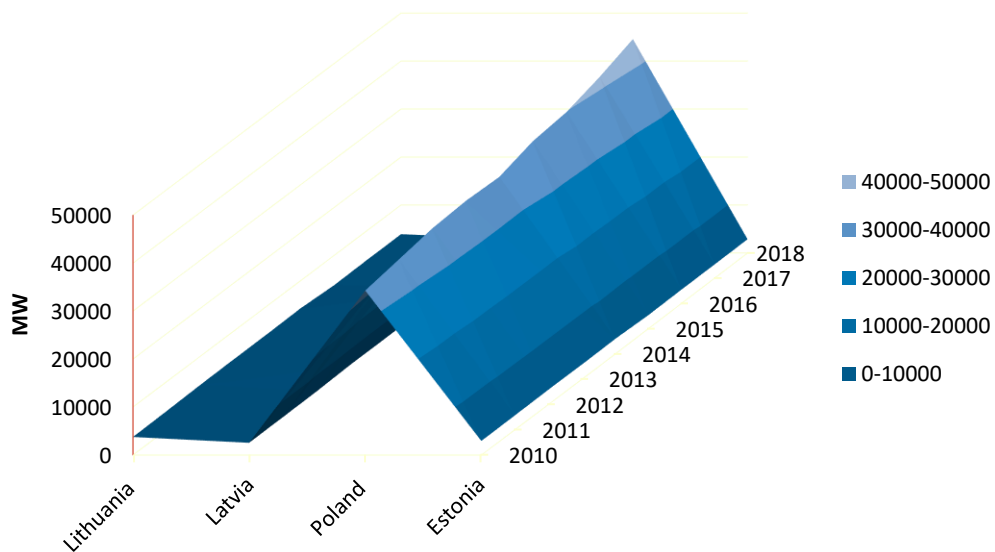
The increased deployment of renewable energy sources promotes not only security of supply, access to sustainable energy at affordable price, technological development, but also creates jobs and promotes regional development. The EU 2030 climate and energy framework lays out EU-wide targets and policy objectives for the period from 2021 to 2030, which includes the achievement of 32% share of renewable energy.

The revised Renewable Energy Directive (2018/2001) states that electricity from renewable energy sources needs to be deployed at the lowest possible cost to consumers and taxpayers. Therefore, Member States should minimise the overall system cost of deployment.

Wind energy is one of the fastest-growing energy sources in the world as it offers a number of advantages: clean, sustainable, low cost, creates jobs, powers economic growth and benefits local communities. The EU's Long Term Decarbonisation Strategy¹ identifies wind power as the dominant source of power generation by 2050, with the potential of 450 GW offshore wind.



The Baltic countries are frontrunners for their ambitious 2030 renewable energy targets and serve as best-case examples for those countries that have not yet achieved their 2020 targets. The Baltic region has the potential to play a crucial role in helping the EU reach its overall 2030 level target. This report examines the uptake of wind energy in four enerCEE countries, namely Estonia, Latvia, Lithuania and Poland.

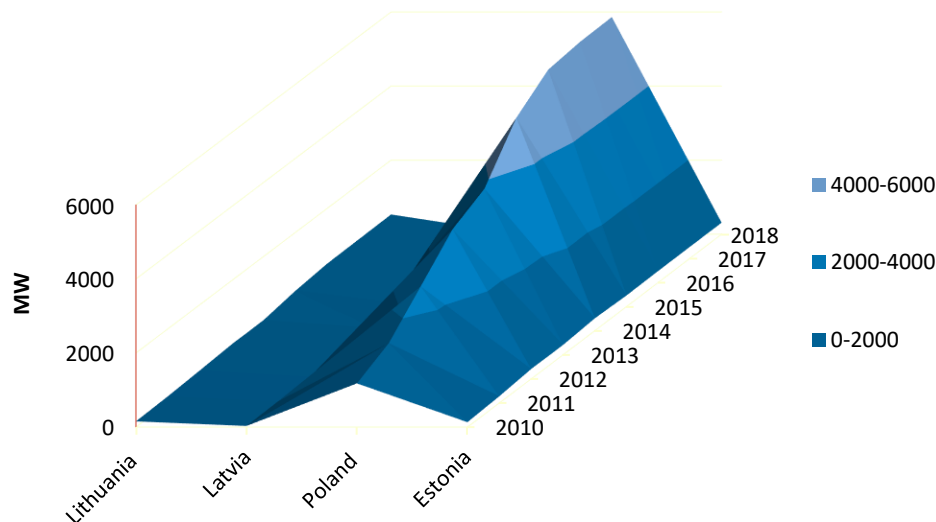


1. Installed electricity capacity (2018)

¹ https://ec.europa.eu/clima/policies/strategies/2050_en

Lithuania

The share of wind has more than tripled since 2010, from 4% to 14% in 2018 (530 MW). As a result, Lithuania exceeded its 2020 target of 23%. In order to continue this development, Lithuania raised its renewable energy target to 45% until 2030. To achieve this ambitious goal, wind capacity needs to be doubled between 2020 and 2030. The NECP targets an increase in the share of electricity production from renewables to 45% in 2030 and 80% in 2050 (18 TWh). Wind should account for at least 55% of renewable power generation in 2030.²



2. Installed Wind Capacity (2018)

Latvia

Forecasts show that electricity consumption will grow by 24% until 2030, with wind power accounting for nearly half. The installed capacity is expected to increase from 2.95 GW in 2015 to 3.4 GW in 2025, due to the foreseen development of small-sized power units, mainly wind parks. The wind capacity is expected to reach 340 - 460 MW in 2025.³

Poland

Poland added 4.7 GW of wind capacity between 2010 and 2018 to its power mix, which accounted for 5.9 GW. Despite rising wind generation, the power mix of Poland is mainly dominated by coal and lignite. Therefore, to accelerate the development of wind and solar projects, Poland's updated energy policy until 2040 targets 21-23% of renewables in final energy consumption in 2030 and 27% in power production by 2030. The development of new offshore wind and solar PV projects could amount to 30 GW by 2040.

Poland held its first renewable auction in 2016 (352 projects up to 1 MW (mainly wind and solar) and received support of PLN 1760m (EUR 415m), followed by two other auctions in 2017 (44 existing eligible plants won the second auction (total support of PLN 116m (EUR 27m))). The third wind power auction took place in November 2018 and 31 offers were selected (PLN 196.2/MWh EUR 45.5/MWh)). In December 2019, 101 projects obtained PLN 16.2bn (EUR 3.8bn) in total, with almost all the amount (PLN 16.1bn, EUR 3.8bn) for onshore wind, corresponding to 2.2 GW of capacity (PLN 208/MWh (EUR 48.8/MWh)).⁴

² Enerdata (2020): Country report, Lithuania, December 2019, <https://global-energy-data.enerdata.net/database/>, accessed on 05.05.2020

³ Enerdata (2020): Country report, Latvia, October 2019, <https://global-energy-data.enerdata.net/database/>, accessed on 05.05.2020

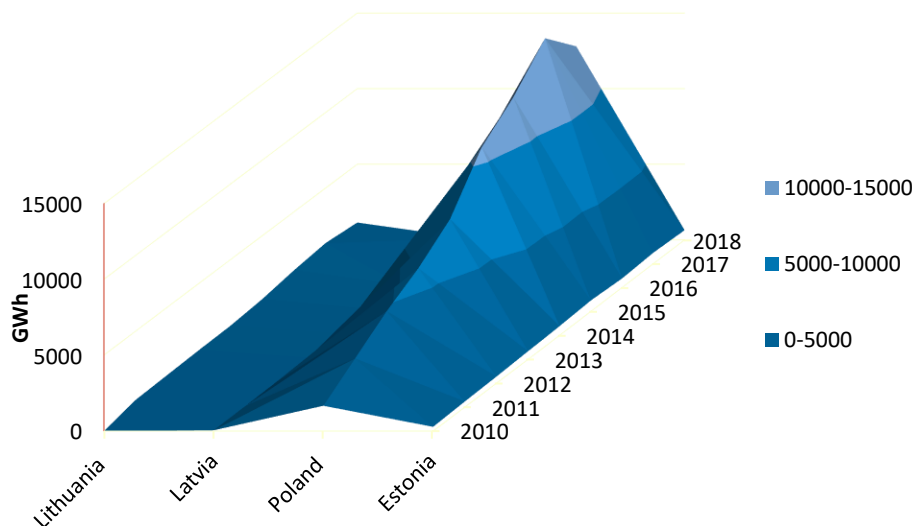
⁴ Enerdata (2020): Country report, Poland, January 2020, <https://global-energy-data.enerdata.net/database/>, accessed on 05.05.2020

In January 2020, the Polish Government issued its draft act for the promotion of offshore wind electricity generation to pave the way for development of the technology in the Baltic Sea. There are currently no offshore wind farms in operation yet, but over 5 GW are planned by 2030.⁵

Estonia

The country's wind capacity increased rapidly, from 31 MW in 2005 to 300 MW in 2015. The key pillars of Estonia's energy policy are the diversification of its energy supply, the implementation of standards regarding energy equipment, the improvement of the management of state energy companies and consumer protection. The country approved an energy development plan until 2030, which aims to have a share of 50% of renewables in final electricity consumption and 80% in heat production in 2030.

Estonia is also building its biggest wind farm in the Baltic region: Aidu wind farm (100 MW) with 30 units of Eleon 3.4 MW wind turbines, which will be completed in 2020.⁶



3. Wind energy production in 2018

Collaboration between the Baltic States

The Baltic States' electricity grid operates synchronously with the Russian and Belarusian systems. As a result, the three Baltic countries, Poland and the European Commission signed a roadmap on 28 June 2018 and set the deadline for concluding synchronisation of the Baltic grid by 2025.

In 2019, the European Commission granted EUR 323 million support for the first phase of the project about Baltic synchronisation, which aims at decoupling the electricity networks of the three Baltic States.⁷ Moreover, in 2018 an agreement of EUR 10 million was signed for the development of the Harmony Link Interconnector between Lithuania and Poland.

⁵ 4coffshore (2020): Poland publishes draft Offshore Wind Act (2020) <https://www.4coffshore.com/news/poland-publishes-draft-offshore-wind-act-nid16685.html> , accessed on 06.05.2020

⁶ Enerdata (2020): Country report, Estonia, April 2019, <https://global-energy-data.enerdata.net/database/>, accessed on 05.05.2020

⁷ European Commission (2020): Energy Union: EU awards €323 million grant to Baltic synchronization project at policy conference on interconnected energy grids, https://ec.europa.eu/info/news/energy-union-eu-awards-eu323-million-grant-baltic-synchronisation-project-policy-conference-interconnected-energy-grids-2019-mar-20_en, accessed on 06.05.2020

In the Baltic Sea, wind development is supported by the Connecting Europe Facility (CEF) mechanism, which is a key EU funding instrument that invests in European energy and supports cross-border renewable energy projects.

The Baltic Intergrid Project (Integrated Baltic Offshore Wind Electricity Grid Development), supported by the European Regional Development Fund (ERDF) over the course of three years (2016-2019), explored the potential of offshore wind in the region in order to strengthen the regional electricity markets and enhance the security of supply in the region.⁸

Summary

In line with the European Union's decarbonisation efforts and its 2030 renewable energy and energy efficiency targets, Estonia, Latvia, Lithuania and Poland updated their national targets and aim to enhance on and offshore wind uptake in the upcoming years. However, there are still a number of barriers (permit granting processes, environmental aspects, taxes) that need to be removed in order to achieve these ambitious goals.

In light of these developments, cross-border cooperation has become increasingly more important in the Baltic Sea. Interconnected markets have the advantage to overcome barriers together, increase security of supply, and reduce technical costs as well as electricity prices.

⁸ Baltic Intergrid (2020): The Baltic InteGrid Project <http://www.baltic-integrid.eu/>, accessed on 06.05.2020